



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/028,439	12/28/2001	Thomas R. Werner	H16 25543 US	4439

22913 7590 05/27/2005

WORKMAN NYDEGGER  
(F/K/A WORKMAN NYDEGGER & SEELEY)  
60 EAST SOUTH TEMPLE  
1000 EAGLE GATE TOWER  
SALT LAKE CITY, UT 84111

EXAMINER

NGUYEN, DUNG T

ART UNIT	PAPER NUMBER
----------	--------------

2828

DATE MAILED: 05/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

8m

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/028,439	WERNER ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Dung (Michael) T. Nguyen	2828	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 April 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

**DETAILED ACTION**

***Response to Arguments***

Applicant's arguments with respect to claims 1-24 have been considered but are moot in view of the new ground(s) of rejection.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ouchi (US6597713) in view of Sun et al. (US2002/0003231).

With respect to claims 1-3, 8, 24, and 25, Ouchi shows in Fig. 19 a vertical cavity surface emitting laser 21 for producing a light beam along a light path; a semiconductive substrate 141 having an etched cavity 142 in said light path and including a thin membrane 130 (wiring substrate) between said etched cavity and said vertical cavity surface emitting laser; and an optical fiber 143 in said etched

cavity and aligned in said light path; wherein said vertical cavity surface emitting laser 21 is attached to said semiconductive substrate 141. Ouchi lacks a light sensor blocks only part of the light beam produced by said vertical cavity surface emitting laser 21 during use such that light of the light beam not blocked by said light sensor is allowed to pass into said etched cavity. Sun teach in Fig.3 a light sensor 42 absorbs (As interpreted by the examiner, “absorb” is equivalent to “block”) (para.0035-11) only part of the light beam produced by the vertical cavity surface emitting laser 46 during use such that light of the light beam not blocked by the light sensor 42 is allowed to pass. For the benefit of providing feedback for controlling the VCSEL performance stability (para.0035, 1.7-8), it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide Ouchi a light sensor blocks only part of the light beam produced by the vertical cavity surface emitting laser during use such that light of the light beam not blocked by the light sensor is allowed to pass as taught by Sun.

With respect to claim 4, Ouchi discloses a metal-semiconductor-metal sensor (col.5, 1.68-69).

With respect to claim 5, Ouchi shows in Fig.19 the semiconductor substrate 141 includes an aperture 111 (it is understood that the microlens 111 has to have an aperture).

With respect to claims 6-7, Ouchi shows in Fig.21 a metal contact 112 (electrode).

With respect to claims 9-11, Ouchi shows in Fig.21 an optical element 161.

With respect to claim 12, Ouchi discloses the adhesive includes epoxy (col.16, l.16-17).

With respect to claims 13 and 20, Ouchi shows in Fig.30 a light beam controller 287.

With respect to claims 21-22, Ouchi the Si substrate (col.16, l.11).

Claims 14-19 and 23 recite a method of fabricating a semiconductor assembly. Since Ouchi and Sun disclose the product, it is inherent a product by process for performing the method as recited in the claims.

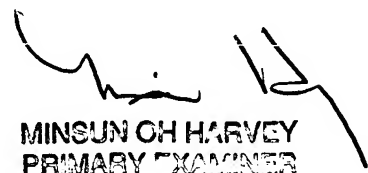
### Communication Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dung (Michael) T Nguyen whose telephone number is (571) 272-1949. The examiner can normally be reached on 8:30 - 17:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Min Harvey can be reached on (571) 272-1835. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-3329.

Michael Dung Nguyen

  
MINSUN OH HARVEY  
PRIMARY EXAMINER